



5751  
PREMIUM TYPE

## HIGH-MU TWIN TRIODE

9-PIN MINIATURE TYPE

*Intended for applications where dependable performance  
under shock and vibration is paramount*

### GENERAL DATA

#### Electrical:

Heater, for Unipotential Cathodes:

Heater Arrangement	Series	Parallel	
Voltage (AC or DC) . . . . .	$12.6 \pm 10\%$	$6.3 \pm 10\%$	volts
Current . . . . .	0.175	0.35	amp

#### Characteristics, Class A<sub>1</sub> Amplifier:

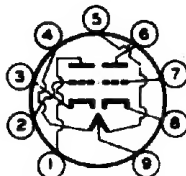
Plate Voltage . . . . .	100	250	volts
Grid Voltage . . . . .	-1	-3	volts
Amplification Factor . . . . .	70	70	
Plate Resistance . . . . .	58000	58000	ohms
Transconductance . . . . .	1200	1200	$\mu$ mhos
Plate Current . . . . .	0.9	1.0	ma

#### Mechanical:

Mounting Position . . . . .	Any
Maximum Overall Length . . . . .	2-3/16"
Maximum Seated Length . . . . .	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip) . . . . .	1-9/16" $\pm$ 3/32"
Maximum Diameter . . . . .	7/8"
Bulb . . . . .	T-6-1/2
Base . . . . .	Small-Button Noval 9-Pin (JETEC No.E9-1)

#### BOTTOM VIEW

Pin 1 - Plate of  
Unit No.2  
Pin 2 - Grid of  
Unit No.2  
Pin 3 - Cathode of  
Unit No.2  
Pin 4 - Heater  
Pin 5 - Heater



Pin 6 - Plate of  
Unit No.1  
Pin 7 - Grid of  
Unit No.1  
Pin 8 - Cathode of  
Unit No.1  
Pin 9 - Heater  
Mid-Tap

### AMPLIFIER - Class A<sub>1</sub>

*Values are for each unit*

#### Maximum Ratings, Absolute Values:

PLATE VOLTAGE . . . . .	330 max.	volts
GRID VOLTAGE:		
Negative bias value . . . . .	55 max.	volts
Positive bias value . . . . .	0 max.	volts
PLATE DISSIPATION . . . . .	0.8 max.	watt
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode . . . . .	100 max.	volts
Heater positive with respect to cathode . . . . .	100 max.	volts
BULB TEMPERATURE (At hottest point on bulb surface) . . . . .	165 max.	$^{\circ}$ C

OCT. 1, 1953

TUBE DEPARTMENT  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

TENTATIVE DATA 1

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## HIGH-MU TWIN TRIODE

### CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN\*

	Note	Min.	Max.	
Heater Current . . . . .	1	0.160	0.190	amp
Amplification Factor . . . . .	1,2	55	85	
Plate Current . . . . .	1,2	0.4	1.8	ma
Plate Current . . . . .	1,3	-	10.5	$\mu$ amp
Transconductance . . . . .	1,2	900	1600	$\mu$ mhos
Reverse Grid Current . . . . .	1,4	-	0.4	$\mu$ amp
Heater-Cathode Leakage Current:				
Heater negative with respect to cathode . . . . .	1,5	-	10	$\mu$ amp
Heater positive with respect to cathode . . . . .	1,5	-	10	$\mu$ amp
Leakage Resistance:				
Between Grid and All Other Electrodes Tied Together	1,6	500	-	megohms
Between Plate and All Other Electrodes Tied Together	1,7	500	-	megohms

\* Each tube is stabilized before characteristics testing by continuous operation for at least 45 hours at room temperature and with dissipation values equivalent to life test conditions.

Note 1: With 12.6 volts ac or dc on heater (series connected).

Note 2: With dc plate voltage of 250 volts and dc grid voltage of -3 volts. Each unit is tested separately. Electrodes of unit not under test are grounded.

Note 3: With dc plate voltage of 250 volts, plate load resistance of 0.1 megohm, and dc grid voltage of -10.5 volts. Each unit is tested separately. Electrodes of unit not under test are grounded.

Note 4: With dc plate voltage of 250 volts, grid resistor of 1.0 megohm, and dc grid voltage of -3 volts. Each unit is tested separately. Electrodes of unit not under test are grounded.

Note 5: With 100 volts dc between heater and cathode, and units connected in parallel.

Note 6: With grid 100 volts negative with respect to all other electrodes tied together.

Note 7: With plate 300 volts negative with respect to all other electrodes tied together.

### SPECIAL RATINGS & PERFORMANCE DATA

#### Shock Rating:

Impact Acceleration . . . . . 600 max. g  
Tubes are held rigid in three different positions in a Navy Type, High Impact (flyweight) Shock Machine and are subjected to 600 g impact acceleration.

#### Fatigue Rating:

Vibrational Acceleration . . . . . 2.5 max. g  
Tubes are rigidly mounted and subjected in each of three positions to 2.5 g vibrational acceleration at 25 cycles per second for 32 hours.

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### Low-Frequency Vibration Performance:

RMS Output Voltage . . . . . 100 max. mv

Under the following conditions and with units connected in parallel; heater voltage of 12.6 volts (series connected), dc plate voltage of 250 volts, dc grid voltage of -3 volts, plate load resistance of 2000 ohms, and vibrational acceleration of 2.5 g at 25 cycles per second.

### Heater-Cycling Life Performance:

Cycles of Intermittent Operation . . . . . 2000 min. cycles

Under the following conditions and with parallel heater arrangement: heater voltage of 7.5 volts cycled one minute on and one minute off, heater 100 volts positive with respect to cathode, and plate and grid voltage = 0 volts.

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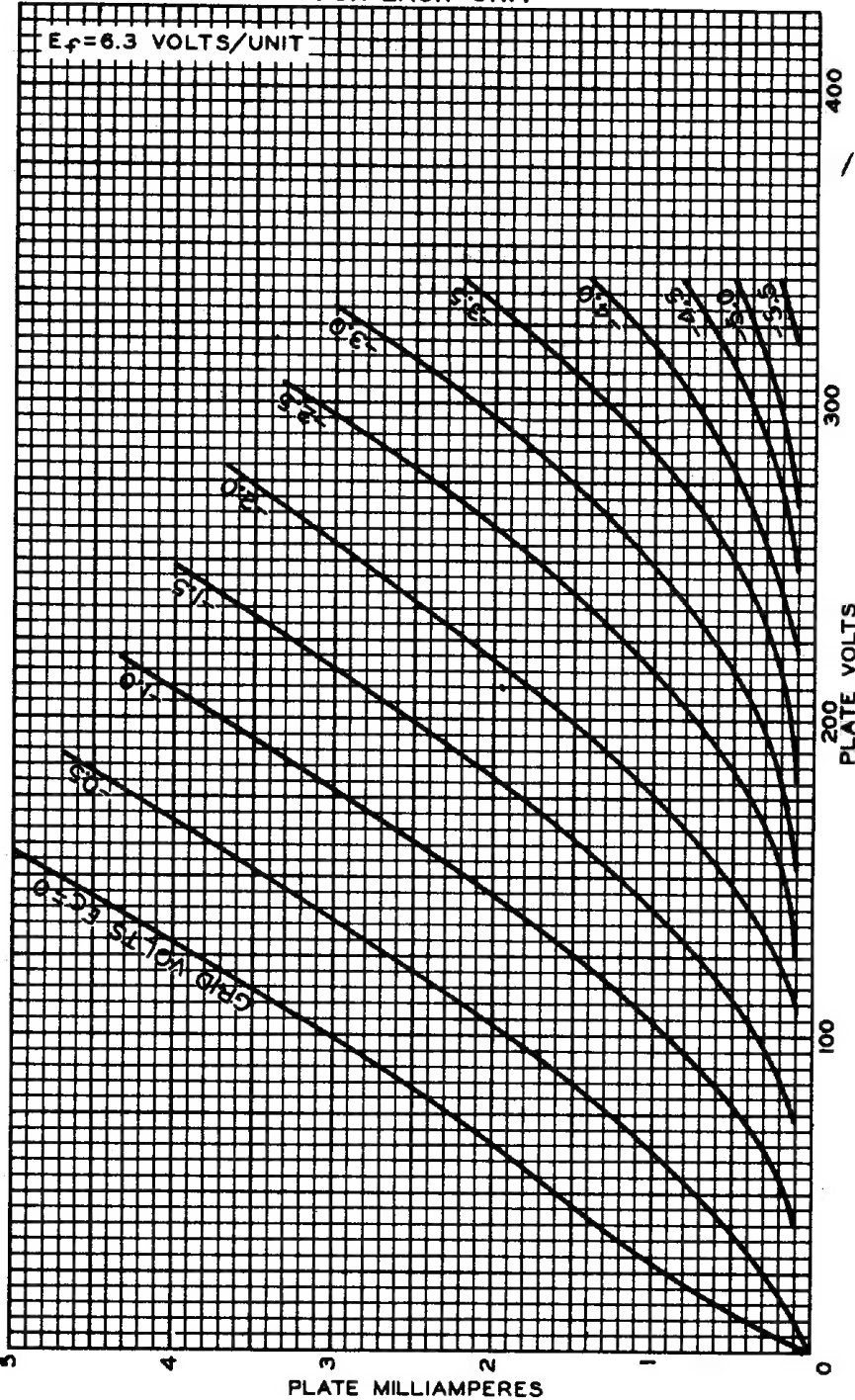
TENTATIVE DATA 2

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# AVERAGE PLATE CHARACTERISTICS FOR EACH UNIT



MAR. 13, 1953

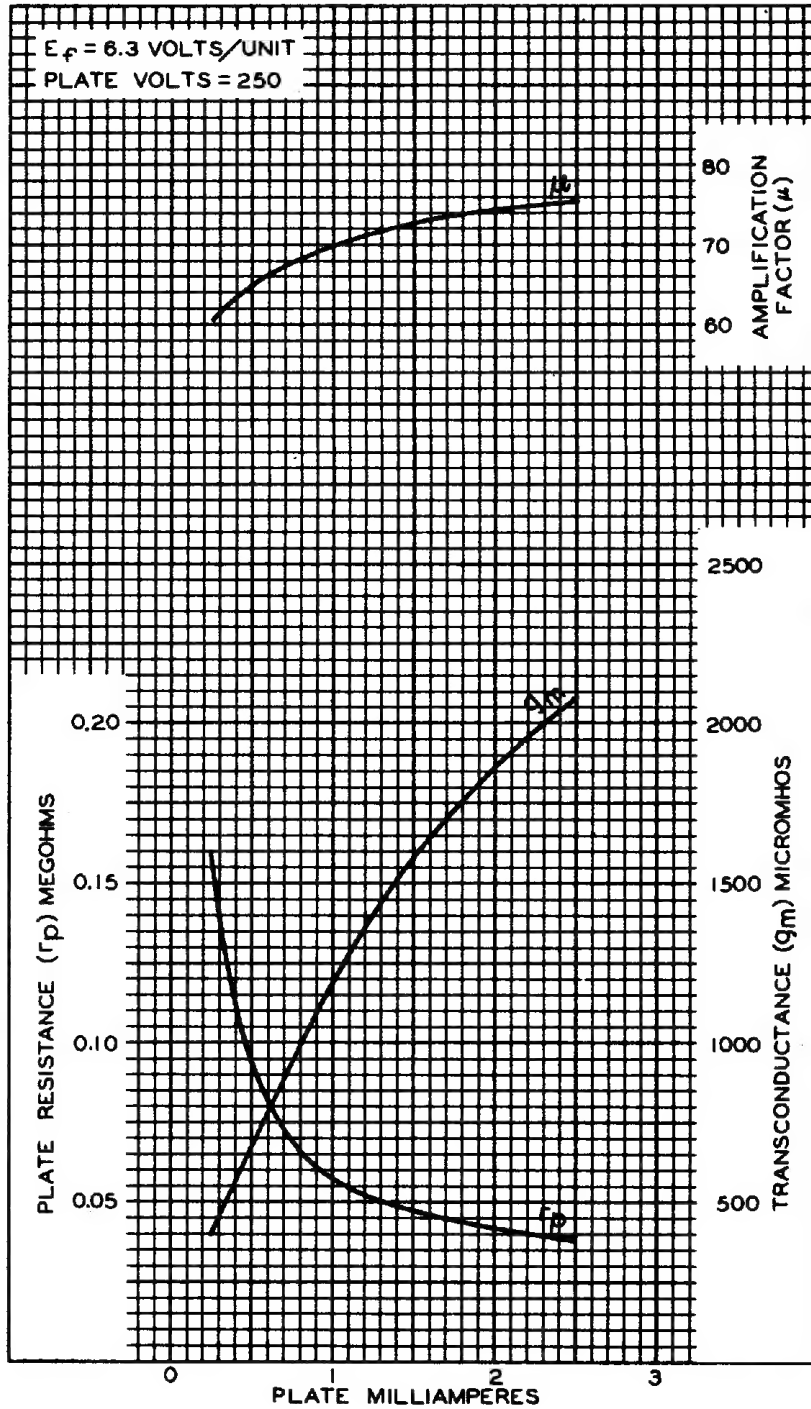
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AVERAGE CHARACTERISTICS  
FOR EACH UNIT



MAR. 12, 1953

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